

Home Heating Oil Tanks

Michigan 4-H Youth Conservation Council

Home Heating Oil

- ▶ Use
- ▶ Aboveground Storage Tank (ASTs)
- ▶ Underground Storage Tank (USTs)
- ▶ 3 different tanks
 - ▶ Steel
 - ▶ Fiberglass
 - ▶ Combination



www.danatanks.com

Home Heating Oil

- ▶ Costs
 - ▶ USTs
 - ▶ ASTs
- ▶ Lifespan
 - ▶ Environments



www.walden-assoc.com



www2.epa.gov

Fuel Oil No. 2 Composition

- ▶ All Fuel Oils are Distillates of Crude Petroleum

Composition-

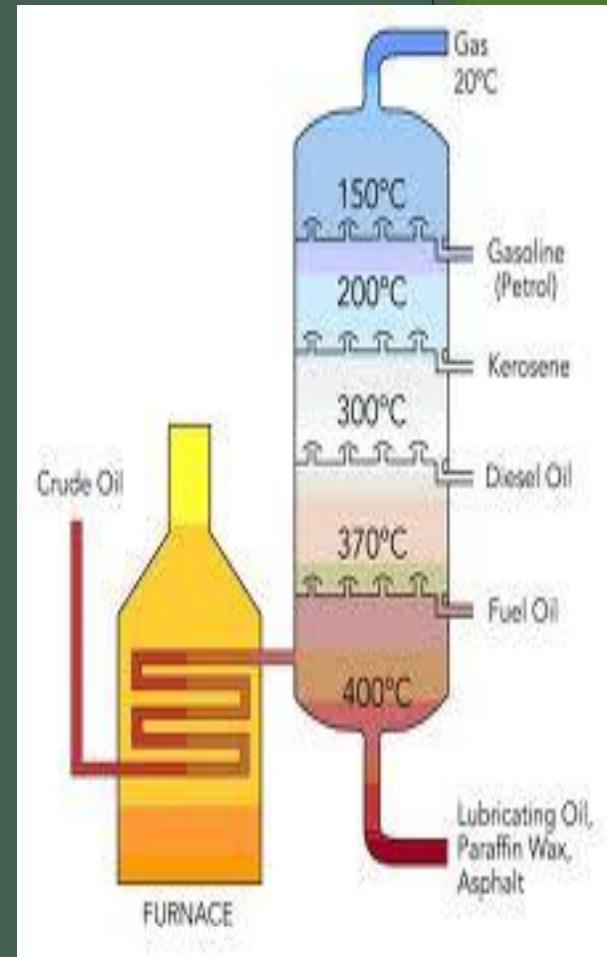
- ▶ 80 - 90% Alkanes and Cycloalkanes
- ▶ 10 - 20% Aromatic compounds and Olefins
- ▶ 0.18 - 4.38% Sulfur compounds



fopnews.wordpress.com

Fuel Oil No. 2 Production

- ▶ Fuel Oil is made with a distillation process that takes advantage of the different weights of hydrocarbons.
- ▶ The larger the molecule, the heavier it is.
- ▶ The different products are then siphoned off at the varying heights in the cooling tower.



Cost Efficiencies

- ▶ Natural Gas - \$9.60 per million BTUs
- ▶ Electricity - \$24.91 per million BTUs
- ▶ Heating Oil - \$27.00 per million BTUs
- ▶ Kerosene - \$27.75 per million BTUs
- ▶ Propane - \$38.50 per million BTUs



Cost Efficiencies

- ▶ People use Kerosene and Heating Oil because of their efficiency
- ▶ Natural Gas is used more in high density areas
- ▶ Propane is more environmental friendly



The Manufacture of Oil Tanks

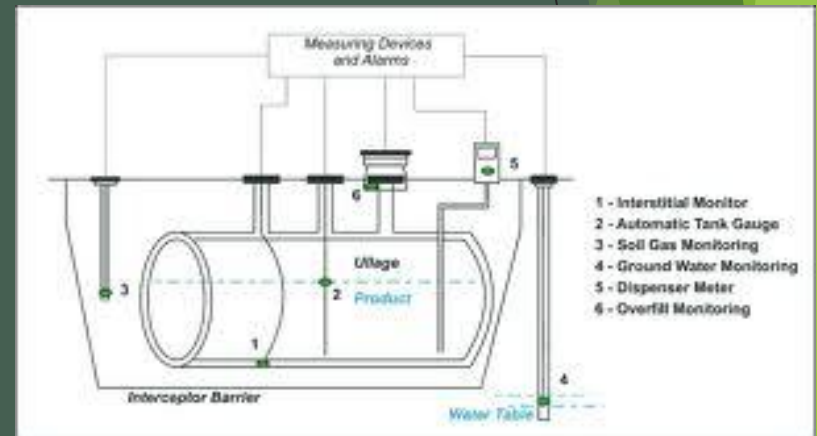
- ▶ Not regulated by Michigan
- ▶ Steel or Fiberglass
- ▶ Should have:
 - ▶ Cathodic Protection
 - ▶ Overfill Protection
 - ▶ Secondary Containment
 - ▶ Interstitial Monitoring



<http://www.combinedenergyservices.com>

The Maintenance of Oil Tanks

- ▶ Secure on level surface
- ▶ Mark fill pipe
 - ▶ Use Catchment Basin
- ▶ Monthly Leak Detection Methods:
 - ▶ Automatic Gauge
 - ▶ Liquid/Vapor Sensors
 - ▶ Statistical Inventory Reconciliation (SIR)



<http://www.processonline.com>

Causes of Leaks

- ▶ Rust
- ▶ Decay
- ▶ Frost Shift
 - ▶ Ice Falling
- ▶ Broken Lines
- ▶ Failing Tank Supports
- ▶ Negligent Maintenance



www.maine.gov

Signs of Leaks

- ▶ Fuel consumption greatly increases
- ▶ Dead/dying vegetation in the area
- ▶ Dark stained soils in comparison to surrounding soils
- ▶ Staining around the fill pipe
- ▶ Oily rainbow sheen on water beneath the tank



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Impacts on Environment

- ▶ Surface Water
- ▶ Plants
- ▶ Groundwater



<http://www.anr.state.vt.us>

Effects on Animals

- ▶ Makes Birds unable to fly or swim
- ▶ Suffocates Fish
- ▶ Effects the Food Chain



Effects on humans

- ▶ Three stages of severity
 - ▶ Acute(1-14days)
 - ▶ Intermediate (15-364)
 - ▶ Chronic (365+)
- ▶ Respiratory Affects
- ▶ Cardiovascular Affects
- ▶ Ocular Affects
- ▶ Other Affects

Unfortunate Accidents



Home Owner Fuel Spill Liability DEQ PowerPoint

Unfortunate Accidents



Home Owner Fuel Spill Liability DEQ PowerPoint

Tank Disposal Cost

- ▶ Range from \$1,000-2,500+
- ▶ Depending on:
 - ▶ Size
 - ▶ Condition
 - ▶ Location (above or underground)



tacticalip.com

Cost of Clean-Up

- ▶ When an underground tank or pipe leaks, the clean-up costs can average \$7,000-50,000+
- Many insurance policies may not cover the entire cost



mangotvnetwork.com

Tank Removal Process

- ▶ Contact heating oil company
- ▶ Inquire about permits
- ▶ After tank removal and disposal
 - ▶ Environmental sampling
 - ▶ Address environmental concerns



Bu.edu

Homeowner Education

- ▶ Understand how to identify fuel tank leaks and damages.
- ▶ Contact your local police and fire department immediately after identifying a leak or spill.
- ▶ Spills may cause homeowner relocation at their own expense until cleanup is complete.



<https://bangordailynews.com>

Tank Regulation

- ▶ Propane tanks are regulated
 - ▶ must be certified and regularly inspected
- ▶ Expand this to include heating oil tanks

Propane Tank



<http://discountpropaneinc.com/en-us/policiesprocedures/tankinstallationcoderequirements.aspx>

Allison Melcher

Heating Oil Tank



<http://www.maine.gov/dep/waste/abovergroundtanks/replacement.html>

Driver Education

- ▶ Propane deliverers are required to be trained
 - ▶ National Propane Gas Association provides testing
 - ▶ The training program was developed with industry groups and associations
- ▶ A similar program could be made for heating oil

Michigan Homeowner Insurance Home Heating Oil Coverage

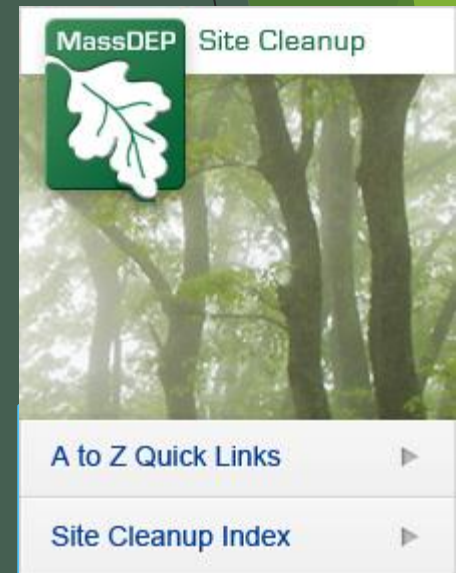
- Home heating oil is not covered
- Insurance riders common if covered
- Classified under “pollution” in most cases
- Third party involvement counts as “accident”



www.combinedenergyservices.com

Other States Homeowner Insurance Coverage

- ▶ Most uncovered, but some changes occurring
- ▶ New Jersey companies cover third-party in full
- ▶ Massachusetts:
 - ▶ Home heating upgrade requirement
 - ▶ Oil safety valve or oil supply line requirement
- ▶ Adoption of these measures in Michigan important



<http://www.mass.gov>

Real Estate Industry

► Problem for Real Estate Agents and Clients

► Agents

- Can be More Difficult to Sell
- Complications with Bad Sale

► Clients looking to Sell

- Change Heating System
- Get Home Inspection

► Clients Looking to Purchase

- Different Heating System
- Spill Risk



- Lost time
- Lost money



<http://www.askwoodfin.com/>

Federal Regulations

- ▶ The EPA regulates underground storage tanks (USTs)
- ▶ Does not include home heating oil tanks
- ▶ The DOE does not regulate home heating oil tanks either

Underground Storage Tank Program

- ▶ The EPA does have an underground storage tank program
- ▶ Have authority to give citations for tanks not up to date



Minnesota Legislature

- ▶ Company records
- ▶ Delivery information
- ▶ Responsibility



www2.epa.gov

Wisconsin Legislation

- ▶ Above ground tanks
- ▶ Installation
- ▶ Do it yourself



Home Owner Fuel Spill Liability DEQ
PowerPoint

Heating Oil Tank Laws in Indiana

- ▶ Clear Definition
- ▶ Mark Tanks
 - ▶ Stickers
 - ▶ Records and File
- ▶ Cannot Abandon Oil Tank
- ▶ Do it yourself

Heating Oil Tanks in Ohio

- ▶ Hazardous Materials
 - ▶ More Than Just Oil
- ▶ No Laws



www.ashireporter.org

Current Michigan Legislation

- ▶ Under Michigan Act 207 home heating oil is regulated differently than propane
- ▶ Propane
- ▶ Violation of the law is a misdemeanor under Michigan law



www.boston.com

Propane vs. Home Heating Oils

- ▶ Any container that releases more than 55 gallons within 24 hours
- ▶ MDEQ person should not deliver oil with these circumstances



www.fedcenter.gov

Proposed Legislation

- ▶ Similar to Propane
- ▶ MDEQ ticketing authority
- ▶ Required Quality of Tanks

